

**Pt. 63, Subpt. UUU, Table 7**

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For each new and existing catalytic cracking unit . . .	Subject to this emission limit for your catalyst regenerator vent . . .	You shall demonstrate continuous compliance by . . .
2. Option 1: Elect NSPS not subject to the NSPS for PM in 40 CFR 60.102. 3. Option 2: PM limit not subject to the NSPS for PM.	See item 1.a. of this table . . . . .  PM emissions must not exceed 1.0 kg/1,000 kg (1.0 lb/1,000 lb) of coke burn-off in the catalyst regenerator.	See item 1.a.i. of this table.  Determining and recording each day the average coke burn-off rate (thousands of kilograms per hour) and the hours of operation for each catalyst regenerator by Equation 1 of § 63.1564 (you can use process data to determine the volumetric flow rate); and maintaining the PM emission rate below 1.0 kg/1,000 kg (1.0 lb/1,000 lb) of coke burn-off.
4. Option 3: Ni lb/hr not subject to the NSPS for PM. 5. Option 4: Ni lb/1,000 lbs of coke burn-off not subject to the NSPS for PM.	Ni emissions must not exceed 13,000 mg/hr (0.029 lb/hr).  Ni emissions must not exceed 1.0 mg/kg (0.001 lb/1,000 lbs) of coke burn-off in the catalyst regenerator.	Maintaining Ni emission rate below 13,000 mg/hr (0.029 lb/hr).  Determining and recording each day the average coke burn-off rate (thousands of kilograms per hour) and the hours of operation for each catalyst regenerator by Equation 1 of § 63.1564 (you can use process data to determine the volumetric flow rate); and maintaining Ni emission rate below 1.0 mg/kg (0.001 lb/1,000 lbs) of coke burn-off in the catalyst regenerator.

[67 FR 17773, Apr. 11, 2002, as amended at 70 FR 6942 and 6948, Feb. 9, 2005]

**TABLE 7 TO SUBPART UUU OF PART 63—CONTINUOUS COMPLIANCE WITH OPERATING LIMITS FOR METAL HAP EMISSIONS FROM CATALYTIC CRACKING UNITS**

As stated in § 63.1564(c)(1), you shall meet each requirement in the following table that applies to you.

For each new or existing catalytic cracking unit . . .	If you use . . .	For this operating limit . . .	You shall demonstrate continuous compliance by . . .
1. Subject to NSPS for PM in 40 CFR 60.102.	Continuous opacity monitoring system.	Not applicable.	Complying with Table 6 of this subpart.
2. Option 1: Elect NSPS not subject to the NSPS for PM in 40 CFR 60.102.	Continuous opacity monitoring system.	Not applicable.	Complying with Table 6 of this subpart.
3. Option 2: PM limit not subject to the NSPS for PM in 40 CFR 60.102.	a. Continuous opacity monitoring system.	The opacity of emissions from your catalyst regenerator vent must not exceed the site-specific opacity operating limit established during the performance test.	Collecting the hourly average continuous opacity monitoring system data according to § 63.1572; and maintaining the hourly average opacity at or below the site-specific limit.
	b. Continuous parameter monitoring systems—electrostatic precipitator.	i. The daily average gas flow rate entering or exiting the control device must not exceed the operating limit established during the performance test.  ii. The daily average voltage and secondary current (or total power input) to the control device must not fall below the operating limit established during the performance test.	Collecting the hourly and daily average gas flow rate monitoring data according to § 63.1572 <sup>1</sup> ; and maintaining the daily average gas flow rate at or below the limit established during the performance test.  Collecting the hourly and daily average voltage and secondary current (or total power input) monitoring data according to § 63.1572; and maintaining the daily average voltage and secondary current (or total power input) at or above the limit established during the performance test.

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For each new or existing catalytic cracking unit . . .	If you use . . .	For this operating limit . . .	You shall demonstrate continuous compliance by . . .
4. Option 3: Ni lb/hr not subject to the NSPS for PM in 40 CFR 60.102.	c. Continuous parameter monitoring systems—wet scrubber.	<p>i. The daily average pressure drop across the scrubber must not fall below the operating limit established during the performance test.</p> <p>ii. The daily average liquid-to-gas ratio must not fall below the operating limit established during the performance test.</p>	<p>Collecting the hourly and daily average pressure drop monitoring data according to § 63.1572; and maintaining the daily average pressure drop above the limit established during the performance test.</p> <p>Collecting the hourly average gas flow rate and water (or scrubbing liquid) flow rate monitoring data according to § 63.1572<sup>1</sup>; determining and recording the hourly average liquid-to-gas ratio; determining and recording the daily average liquid-to-gas ratio; and maintaining the daily average liquid-to-gas ratio above the limit established during the performance test.</p>
	a. Continuous opacity monitoring system.	The daily average Ni operating value must not exceed the site-specific Ni operating limit established during the performance test.	Collecting the hourly average continuous opacity monitoring system data according to § 63.1572; determining and recording equilibrium catalyst Ni concentration at least once a week <sup>2</sup> ; collecting the hourly average gas flow rate monitoring data according to § 63.1572 <sup>1</sup> ; determining and recording the hourly average Ni operating value using Equation 11 of § 63.1564; determining and recording the daily average Ni operating value; and maintaining the daily average Ni operating value below the site-specific Ni operating limit established during the performance test.
	b. Continuous parameter monitoring systems—electrostatic precipitator.	<p>i. The daily average gas flow rate entering or exiting the control device must not exceed the operating limit established during the performance test.</p> <p>ii. The daily average voltage and secondary current (or total power input) must not fall below the level established in the performance test.</p> <p>iii. The monthly rolling average of the equilibrium catalyst Ni concentration must not exceed the level established during the performance test.</p>	<p>See item 3.b.i. of this table.</p> <p>See item 3.b.ii. of this table.</p> <p>Determining and recording the equilibrium catalyst Ni concentration at least once a week<sup>2</sup>; determining and recording the monthly rolling average of the equilibrium catalyst Ni concentration once each week using the weekly or most recent value; and maintaining the monthly rolling average below the limit established in the performance test.</p>

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For each new or existing catalytic cracking unit . . .	If you use . . .	For this operating limit . . .	You shall demonstrate continuous compliance by . . .
5. Option 4: Ni lb/ton of coke burn-off not subject to the NSPS for PM in 40 CFR 60.102.	c. Continuous parameter monitoring systems—wetscrubber.	<p>i. The daily average pressure drop must not fall below the operating limit established in the performance test.</p> <p>ii. The daily average liquid-to-gas ratio must not fall below the operating limit established during the performance test.</p> <p>iii. The monthly rolling average equilibrium catalyst Ni concentration must not exceed the level established during the performance test.</p>	<p>See item 3.c.i. of this table.</p> <p>See item 3.c.ii. of this table.</p> <p>Determining and recording the equilibrium catalyst Ni concentration at least once a week<sup>2</sup>; determining and recording the monthly rolling average of equilibrium catalyst Ni concentration once each week using the weekly or most recent value; and maintaining the monthly rolling average below the limit established in the performance test.</p>
	a. Continuous opacity monitoring system.	The daily average Ni operating value must not exceed the site-specific Ni operating limit established during the performance test.	Collecting the hourly average continuous opacity monitoring system data according to § 63.1572; collecting the hourly average gas flow rate monitoring data according to § 63.1572 <sup>1</sup> ; determining and recording equilibrium catalyst Ni concentration at least once a week <sup>2</sup> ; determining and recording the hourly average Ni operating value using Equation 12 of § 63.1564; determining and recording the daily average Ni operating value; and maintaining the daily average Ni operating value below the site-specific Ni operating limit established during the performance test.
	b. Continuous parameter monitoring systems—electrostatic precipitator.	<p>i. The daily average gas flow rate to the control device must not exceed the level established in the performance test.</p> <p>ii. The daily average voltage and secondary current (or total power input) must not fall below the level established in the performance test.</p> <p>iii. The monthly rolling average equilibrium catalyst Ni concentration must not exceed the level established during the performance test.</p>	<p>See item 3.b.i. of this table.</p> <p>See item 3.b.ii. of this table.</p> <p>See item 4.b.iii. of this table.</p>
	c. Continuous parameter monitoring systems—wet scrubber.	<p>i. The daily average pressure drop must not fall below the operating limit established in the performance test.</p> <p>ii. The daily average liquid-to-gas ratio must not fall below the operating limit established during the performance test.</p>	<p>See item 3.c.i. of this table.</p> <p>See item 3.c.ii. of this table.</p>

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For each new or existing catalytic cracking unit . . .	If you use . . .	For this operating limit . . .	You shall demonstrate continuous compliance by . . .
		iii. The monthly rolling average equilibrium catalyst Ni concentration must not exceed the level established during the performance test.	See item 4.c.iii. of this table.

<sup>1</sup> If applicable, you can use the alternative in § 63.1573(a)(1) for gas flow rate instead of a continuous parameter monitoring system if you used the alternative method in the initial performance test.

<sup>2</sup> The equilibrium catalyst Ni concentration must be measured by the procedure, Determination of Metal Concentration on Catalyst Particles (Instrumental Analyzer Procedure) in appendix A to this subpart; or by EPA Method 6010B, Inductively Coupled Plasma-Atomic Emission Spectrometry, EPA Method 6020, Inductively Coupled Plasma-Mass Spectrometry, EPA Method 7520, Nickel Atomic Absorption, Direct Aspiration, or EPA Method 7521, Nickel Atomic Absorption, Direct Aspiration; or by an alternative to EPA Method 6010B, 6020, 7520, or 7521 satisfactory to the Administrator. The EPA Methods 6010B, 6020, 7520, and 7521 are included in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, Revision 5 (April 1998). The SW-846 and Updates (document number 955-001-00000-1) are available for purchase from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402, (202) 512-1800; and from the National Technical Information Services (NTIS), 5285 Port Royal Road, Springfield, VA 22161, (703) 487-4650. Copies may be inspected at the EPA Docket Center (Air Docket), EPA West, Room B-108, 1301 Constitution Ave., NW., Washington, DC; or at the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC. These methods are also available at <http://www.epa.gov/epaoswer/hazwaste/test/main.htm>.

[70 FR 6948, Feb. 9, 2005]

TABLE 8 TO SUBPART UUU OF PART 63—ORGANIC HAP EMISSION LIMITS FOR CATALYTIC CRACKING UNITS

As stated in § 63.1565(a)(1), you shall meet each emission limitation in the following table that applies to you.

For each new and existing catalytic cracking unit . . .	You shall meet the following emission limit for each catalyst regenerator vent . . .
1. Subject to the NSPS for carbon monoxide (CO) in 40 CFR 60.103.	CO emissions from the catalyst regenerator vent or CO boiler serving the catalytic cracking unit must not exceed 500 parts per million volume (ppmv) (dry basis).
2. Not subject to the NSPS for CO in 40 CFR 60.103 ...	a. CO emissions from the catalyst regenerator vent or CO boiler serving the catalytic cracking unit must not exceed 500 ppmv (dry basis). b. If you use a flare to meet the CO limit, the flare must meet the requirements for control devices in § 63.11(b): visible emissions must not exceed a total of 5 minutes during any 2 consecutive hours.

[67 FR 17773, Apr. 11, 2002, as amended at 70 FR 6942 and 6948, Feb. 9, 2005]

TABLE 9 TO SUBPART UUU OF PART 63—OPERATING LIMITS FOR ORGANIC HAP EMISSIONS FROM CATALYTIC CRACKING UNITS

As stated in § 63.1565(a)(2), you shall meet each operating limit in the following table that applies to you.

For each new or existing catalytic cracking unit . . .	For this type of continuous monitoring system . . .	For this type of control device . . .	You shall meet this operating limit . . .
1. Subject to the NSPS for carbon monoxide (CO) in 40 CFR 60.103.	Continuous emission monitoring system.	Not applicable .....	Not applicable.
2. Not subject to the NSPS for CO in 40 CFR 60.103.	a. Continuous emission monitoring system. b. Continuous parameter monitoring systems.	Not applicable .....  i. Thermal incinerator .....	Not applicable.  Maintain the daily average combustion zone temperature above the limit established during the performance test; and maintain the daily average oxygen concentration in the vent stream (percent, dry basis) above the limit established during the performance test.